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ABSTRACT

Five articles concerning college reading instruction are included in this special interest journal. Bill Fowler and Barry M. Kroll investigate hidden factors in tests of reading comprehension, revealing that most conventional tests have question-design weaknesses allowing students to perform successfully by the use of test wisdom alone. Imogene Freer reviews the changing aims and functions of reading programs over the past 20 years. Helen Covington and Lee Mountain discuss junior college faculty and student expectations regarding reading courses as determined by questionnaire responses from faculty at 59 Texas colleges and students from eight schools. Areas covered include comprehension, library research, inductive learning, and reading rate. Faye Curran presents an evaluation of the tutorial program at Miami University-Middleton. Faculty, tutors, and tutees were surveyed and ACT and College Entrance Exam Board scores were used to predict grade point average as a measure of success. A final paper by Walter J. Lamberg studies changes in reading rate of students after participation in a reading improvement mini-course. (MB)

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FORUM FOR READING

The Journal for College Reading Teachers

Clayton Pinette and Kent Smith, Eds.

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Developmental Studies Center
Bangor Community College
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Editors of the Forum For Reading:

Clayton Pinette, Kent Smith
Bangor Community College

Editorial Review Board:

Lorraine Beitler, New York City Community College
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BOOK REVIEW

Clayton Pinette
Bangor Community College
Maine

During the past several years, an increasing number of college reading and study skills textbooks have become available. A choice of appropriate instructional materials is always of great interest.

To college teachers of reading who wish to use a no-nonsense approach to reading and study skills the text by John Langan, Reading and Study Skills published by McGraw-Hill Book Company warrants attention. John Langan "calls a spade a spade." He places the learning responsibility on the learner. Too often in the past, educators have placed the learning responsibility on everyone but the learner. Some institutions are so busy giving support to students that students have little time left being learners. Other institutions, unfortunately, provide little — if any — support.

In John Langan's text, Reading and Study Skills, study skills range from note taking to library use. Word skills are introduced along with rapid reading and skim reading and comprehension is also a part of the program. Even though these skills are well presented, there is plenty of room for the instructor to supplement these basic skills; nevertheless, the text provides a valuable guide.

The material in Reading and Study Skills makes the learner responsible for the learning task. It presents basic skills and allows for a logical presentation of information and skill. Reading and Study Skills is a no-nonsense aid to developing an appropriate instructional program which addresses what is expected of the college student.

HIDDEN FACTORS IN TESTS OF READING COMPREHENSION

Bill Fowler
Barry M. Kroll
Iowa State University

The validity of multiple-choice comprehension tests is generally considered to be a function of the dependence of the test questions upon a reading mastery of the text to which the questions refer. A standard procedure has been developed for studying the passage dependence of reading test items: the researcher removes the passages from a reading test booklet and administers the comprehension questions alone. Items which can be answered correctly at greater than chance expectancy are considered to be "passage independent"; items which can be answered nearer the chance level are "passage dependent." The importance of this procedure lies not only in exposing weaknesses in many of our most respected reading comprehension tests, but also in stimulating reconsideration of the performance factors involved in such reading tests.

The passageless validation method has already been applied to the Nelson Reading Test, the California Achievement Tests, the SRA Achievement Series—Reading, the Metropolitan Achievement Tests, the Iowa Test of Basic Skills (Tuinman, 1974); the Cooperative English Test (Preston, 1964); the Nelson-Denny Reading Test (Farr & Smith, 1970; Pyrczak, 1972); and the Minnesota Scholastic Aptitude Test (Fowler & Kroll, 1978). In addition to extensive application of the method, two indices of passage dependence have been developed. Tuinman (1974) proposed the PDI (Passage Dependency Index) formula which calculates dependence by means

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of a comparison of performance on two test administrations—one with the reading passage and one without. Pyrczak (1972) proposed the I (Independence) formula which can be calculated from one passageless administration. A discussion of the differences between these two indices is given by Pyrczak (1975, 1976). One other significant study in this body of research is Tuinman's demonstration (1974) that when given questions which can be answered without reading the passages, even quite young students will do so.

In explaining students' success on passageless reading tests, most researchers emphasize the characteristics of test questions. Four kinds of questions are commonly considered to be weak measures of comprehension: those which measure general knowledge (fact questions), those which test vocabulary, those which can be answered by attending to the syntactic, and semantic characteristics of the question (stem-cued questions), and those which can be answered on the basis of clues provided in surrounding questions (context-cued questions.)

Regardless of the obscurity of their subject matter, factual questions run the risk of measuring knowledge rather than reading comprehension. Farr and Smith (1970), among others, note the prevalence of this kind of question in tests of reading. Examples can be found in almost all comprehension tests. One question from the Reading subtest of the Stanford Test of Academic Skills, for example, asks what is the greatest limitation of adobe as a building material. Options for this question are: "A. cannot be used in damp climates, B. is too expensive to cut or chisel to shape, C. cannot be used for any others except small buildings, D. is made of hard-to-find substances." Even

slight acquaintance with adobe is sufficient to cause one to select "A," the keyed answer. Another question in this test asks if "hound dogs and foxes are usually A. enemies, B. in zoos, C. found on farms, D. raised together." (Yes, "A" is the answer.) The Iowa Silent Reading Tests contains an eight-question section on the legend of Cincinnatus, the answers to which would be relatively easy for one well-versed in Roman history. And the Minnesota Scholastic Aptitude Test includes a series of questions that would be simple for a student knowledgeable in the area of physics: "What is the name given to the temperature at which a perfect gas would cease to exert pressure?" "What factor is held constant in the statement of Boyle's Law?"

Closely associated with questions of fact are questions which depend on vocabulary sophistication. The McGraw-Hill Reading Test asks, "In a patrilineal system, what becomes of the children? 5. Both sexes belong to their mother's group, 6. Both sexes belong to their father's group, 7. The males belong to their father's group, 8. The females belong to their mother's group." Knowledge of the Latin root "pater" would be sufficient to lead one to the keyed answer, number 6. The Stanford Reading Test asks, "The word innovation in line 19 most nearly means the same as--A. charity, B. fox hunting, C. something new, D. a known cause." Fowler and Kroll (1978) found that no less than 18 of the 30 questions contained in the reading section of the Minnesota Scholastic Aptitude Test were largely dependent on vocabulary, and that even without the passage students could answer questions with 66% accuracy. To give one example, the MSAT asks:

4.

What one word in the paragraph means "unvarying"?

1 depends 2 constant 3 absolute 4 wholly 5 perfect

A third weakness sometimes mentioned in the literature on reading comprehension questions involves the relationship between the stem of a question and its options. That the language of the stem can suggest the keyed option by content and length has been studied by Pyrczak (1974). Using Part II of the Traxler High School Reading Test, a test designed to measure students' ability to identify the main idea of a given passage, Pyrczak found that the keyed options often state general principles while the distractors are briefer statements of specific fact. Not surprisingly, then, Pyrczak found that both high school and graduate students answered the passageless questions from this test well above chance expectancy. The following example of a stem-cued question comes from the reading section of the Minnesota Scholastic Aptitude Test:

What phrase of exactly three words in the paragraph tells the subject of an experiment by an educator?

1 certain specified objectives	2 agriculturalist treats soil	3 methods of teaching
4 the same manner	5 behavior of objects	

The word "educator" in the stem is intimately linked to the word "teaching" in option 3--making this option the most likely (and correct) response.

As in the case of the three other categories of passage-independent questions, context-cued questions

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are relatively easy to find. The second passage of The Nelson-Denny Reading Test, for example, describes a personality type--the perfectionist. But one need not read the passage to discover that; one need only read the questions about the passage. We give all four questions on this passage as evidence that all but one of them can be answered either by common sense or by clues contained in the other questions:

1. One finds people with curiosity about their best self:
 1. Only among the aristocrats.
 2. Only among poor people.
 3. Only among the poets.
 4. In all classes.
 5. Only among barbarians.
2. To certain aspects of the desire to be perfect, men have often given the name:
 1. Ability.
 2. Courage.
 3. Initiative.
 4. Genius.
 5. Common sense.
3. Such persons are concerned with the pursuit of:
 1. Money.
 2. Prestige.
 3. Power.
 4. Genius.
 5. Perfection.

6.

4. What is the chief topic discussed in this paragraph?

1. Genius.
2. Culture.
3. Pursuit of perfection.
4. Passion.
5. The will of God.

If one follows the clue suggested by question 2 that "the desire to be perfect" is at least a major topic of the passage, then one could with good reason choose "Pursuit of perfection" as the correct answer to question 4. If reassurance for that selection is wanted, it is available in question 3, where "Perfection" would not only provide a reasonable cloze to "pursuit of _____," but such closure is the precise language of the option for which reassurance was needed. In other words, the stem in question 2, "desire to be perfect," correctly leads one to "pursuit of Perfection" as the correct answer to question 3, which in turn is the precise language of the correct option in question 4. In answering the first question of this set, one need only rely on one's common sense judgement that people with curiosity about their best self are found in all classes (option 5). Indeed, the only difficulty encountered in answering these four questions is in choosing "Genius" rather than "Initiative" as the answer to question 2.

These considerations of four basic weaknesses in test design explicate only the stimulus side of test performance. Equally significant are the verbal and inferential skills with which students respond to test questions. Prominent among such skills must be the nebulous phenomenon sometimes referred to as "test wisdom." Test wisdom includes a great many

factors, including the ability to anticipate and prepare oneself both mentally and emotionally for testing situations. But the aspects of test wisdom that seem most relevant are those inferential skills which enable some students to use the weaknesses of multiple choice questions (e. g., stem and context cues) to select the most likely answer. In other words, one facet of test wisdom is proficiency in responding to the features of test questions, irrespective of one's comprehension of the passage to which the questions refer.

In an effort to ascertain which cognitive strategies are used in answering passageless reading questions, Pyrczak (1972) asked examinees to mark one or more symbols indicating the basis of their choice: K (general knowledge), I (interrelatedness), and G (guess). He discovered that for certain items large numbers of students were able to select the correct response through either general knowledge or interrelatedness. The finding supports the hypothesis that successful performance on comprehension questions reflects a sophistication in general knowledge, vocabulary, and linguistic reasoning, rather than genuine comprehension of the passage to which the question refers. The questions are measuring skills, but these skills do not represent the comprehension gained from reading an assigned passage.

If we could be confident that proficiency in responding to the features of questions is the same kind of proficiency involved in comprehending the passages, there would be no need to make test questions more passage-dependent; we could use passageless tests as measures of reading ability. However, the assumption implicit in criticism of many comprehension questions is that proficiency in

answering them is sufficiently different from reading proficiency to invalidate passage-independent questions as measures of reading comprehension. Despite the intuitive sense of that assumption, it remains difficult to test. Preston (1964) reported significant (but very low) correlations between the tests and "reading comprehension as conventionally measured" (p. 181). The fault of this finding, however, is that the conventional measures Preston refers to are the same kinds of comprehension tests his own study invalidates.

From the practitioner's point of view, the important question continues to be whether conventional reading comprehension tests can validly measure comprehension. The literature and test items reviewed here suggest that most conventional tests have serious weaknesses in question design--weaknesses which permit students to perform successfully by the use of test wisdom alone. Nevertheless, if extraneous performance factors can be minimized, the passage-plus-questions design seems capable of measuring many aspects of reading comprehension. Test makers have begun to consider those hidden performance factors which thwart accurate measurement of reading comprehension, and they are doing what they can to make test questions more dependent on the passages to which they refer (Scherich and Hanna, 1977). In addition, alternative kinds of comprehension tasks are being developed (Carver, 1975, 1977). But until alternative reading comprehension tests are perfected, reading teachers would be well advised to cross-validate results from conventional comprehension tests by informal procedures. Asking students to retell or summarize a passage remains a useful subjective check on the results obtained from standard reading comprehension tests.

Bibliography

- Carver, Ronald P. Revised procedures for developing reading-input materials and reading-storage tests. Journal of Reading Behavior. 1975, 7, 155-172.
- Carver, Ronald P. Measuring reading comprehension using the paraphrase test and the reading-storage test. Journal of Reading Behavior. 1977, Winter, 381-389.
- Farr, Roger & Smith, Carl B. The effects of test item validity on total test reliability and validity. In G. Schick and M. M. May (Eds.), Reading: Process and Pedagogy. Nineteenth Yearbook of the National Reading Conference, Vol. I. Milwaukee: The National Reading Conference, 1970, 122-134.
- Fowler, Bill & Kroll, Barry M. Verbal skills as factors in the passageless validation of reading comprehension tests. Perceptual and Motor Skills. 1978, 47, 335-338.
- Preston, Ralph C. Ability of students to identify correct responses before reading. The Journal of Educational Research. 1974, 48, 181-183.
- Pyrzczak, Fred. A responsive note on measures of the passage dependence of reading comprehension test items. Reading Research Quarterly. 1975-1976, 11, 112-117.
- Pyrzczak, Fred. Objective evaluation of the quality of multiple-choice test items designed to measure comprehension of reading passages. Reading Research Quarterly. 1972, 8, 62-71.

10.

Pyrzczak, Fred. Passage-dependence of items designed to measure the ability to identify the main ideas of paragraphs: Implications for validity. Educational and Psychological Measurement. 1974, 34, 343-348.

Scherich, Henry H. & Hanna, Gerald S. Passage-dependency data in the selection of reading comprehension test items. Educational and Psychological Measurement. 1977, 37, 991-997.

Tuinman J. Jaap. Determining the passage dependency of comprehension questions in 5 major tests. Reading Research Quarterly, 1973-1974, 9, 207-223.

PRIORITIES, SERENDIPITY,
AND YOU

Imogene Freer
Odessa College

Sometimes, to know where we're going, we have to review where we've been. "We've come a long way, Baby, but we've still got a long way to go." When I started in this business around twenty years ago, I attended my first IRA conference in Toronto, Canada, in 1959. Fourteen people expressed an interest in secondary and college reading. Most of that first group of fourteen people were English teachers who had been told "You'll have two classes of Remedial Reading next year"; the others were former elementary teachers. Frankly, most of them weren't too thrilled over their new assignments.

But there was one thing which favored this new breed of teacher—their uniqueness. College reading programs were few in number; in Texas such programs were almost non-existent. At the first sectional meeting of Reading in the Texas Junior College Teachers Association, I was the president, secretary, and speaker. My audience consisted of twelve people, mostly men. In my message "Organizing a Reading Program," I blamed administrators for their lack of concern in providing facilities, money and faculty. I was later chagrined to find out that most of these men were college presidents. I did have, however, five job offers stemming from that meeting.

The main objective of most early reading programs was to enlist students! In "open" door institutions, no pre-enrollment registration or counseling was done. We talked to as many students as possible before and during registration. Sometimes the

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possibility of ineligibility or of flunking out of school was the convincing argument; other times we promised to do everything from upgrading one's love life, to teaching one all about phonics.

Commercial programs helped enlistment in some ways; such programs sparked interest in speed reading. Capitalizing on this interest, I could motivate students to want to improve a wide array of reading skills.

Typically, classes began with quick-type survey tests such as the Nelson-Denny and the Diagnostic Reading Tests; rarely were more individualized tests given.

One large Controlled Reader tended to be used with everyone, regardless of abilities, with everyone reading films at the same rate. Students, however, did take comprehension tests afterwards. Later, the individualization trend was met by dividing the large groups into smaller groups for reading films. For perception training, the tachistoscope flashed letters and numbers; one student made the astute observation that he "could see them damn numbers, he just couldn't read."

Software materials were very scarce. Every student bought the same workbook, but it was much too difficult for most. The Odessa College Reading Center, where I teach, also had a few library books—one by Costain, a few Zane Grey westerns, a few Conan Doyle and Christie mysteries, and a copy of Sweet Sixteen, which was not too palatable for the male reading student. The paperback book

had not yet come into its own.

Contrast these small beginnings with today. Now, reading personnel in colleges often have Ph.D.'s in reading, have had clinical training, and are research oriented.

Testing programs have improved; perhaps, though, they have not improved as much as we wish. We're still using the "good old Nelson-Denny." In addition however, we have multi-purpose tests such as Analytical Tests, Adult Basic Tests, Inventory Tests, Reading Scales, Critical Thinking Tests, and many others. The practitioner can choose the test most appropriate for an individual instead of requiring the same one of all students or in addition to the initial test. Those of us teaching reading "back then" began to develop our own materials and to search diligently for new and better ways of individualizing all reading instruction.

Now, there are beautifully equipped reading labs. Any reading center can easily have at least \$50,000 worth of beautifully designed media with films, filmstrips, and cassettes which feature all kinds of individualized programs in phonics, spelling, vocabulary, ethnic-oriented materials, etc. Today's workbooks and worksheets are highly individualized and range from materials essential for the functional illiterate to materials for the highly sophisticated reader. Paperback books abound to suit every taste and a self-contained library of paperbacks is surely an essential in today's reading programs.

When the concept of a "hierarchy of skills" burst forth upon us, our courses began to reflect behavioral and instructional objectives. The writing of such objectives enabled us to pinpoint

problems and individualize to an even greater extent. The concept of developing modules for different skills also has become popular. The total concept of "testing, contract, prescription," is the working structure of many of today's programs. Actually, no matter what the techniques or terminology, most of us are still working towards accountability that will please the student, the dean, the president, the legislators, the parents, and God.

If, then, most of us are blessed by having a fine array of materials, well-educated trained personnel, well-defined objectives, and acceptable innovative methods, where do we go from here?

Within the public schools the mood of the general population seems to favor a "back to basics" approach. The lower SAT scores, poorer high school and academic achievement, and general disillusionment with recent educational innovations are all cited as reasons for a back to basics emphasis. In the past, a teacher wasn't teaching unless he/she had a highly structured, teacher-directed, learning situation. With the concept of open education, however, teachers and students alike ran headlong into a revolutionary teaching-learning situation, a situation fostering freedom and lack of a rigid structure. But education patterns have always run in cycles. Many of us have lived through several cycles, which leads us to murmur "This too shall pass." Perhaps neither a blind return is the answer; to me, the structure will be an evolving process whereby there is a healthy balance between teacher-directed structure and an environment within which there is student freedom of choice. However, the "back to basics" movement and the

changing two-year college population does focus the public spotlight on college reading programs. Our greatest contribution to the "back to basics" idea can be, perhaps, the centering of our priorities around RELEVANCE, specifically, relevance to the students' needs.

So these questions come to mind: Have we relevant instruction for undereducated young adults? technical-vocational people? the returning housewife? senior citizens? functional illiterates? veterans? foreign students? the various ethnic community groups? Since degrees are not as popular and, apparently, not as necessary as they once were, "today's student" demands an ever widening array of testing devices, many as yet undeveloped, a plethora of methods, and abundant materials. These materials must reach out to and touch everyone of today's different students. Developing the cognitive skills is relevant, but we must not forget the affective area. Enabling this diverse student population to improve the quality of their lives may require a great deal of tender, loving care, but this too is relevant.

I have agonized along with many of you in making the above a reality. It is a difficult task to make student experiences relevant. In Archy and Mehitabel, Archy says that an "optimist is a guy that has never had much experience."¹ This is true of today's incoming students; he has done little reading or studying. And regarding the latter, how do you teach study methods anyway? I've tried numerous "How to Study" books; for the most part, if my students could read the "How to Study" books, they wouldn't need me. Do you have great success teaching SQ3R, OARWET, or other reading formulas? How about underlining, outlining, and other study techniques?

Most of my students appear to have difficulty applying such study suggestions to their textbooks. Probably each study skill must be taught and reinforced one at a time. I'm sure the great learned professors in their ivory towers would shout "Bravo! that's the way it should be done." The lowly practitioner, however, sighs: "How can that be done with thirty students in each of my five classes?" Although our doors are always open to any student needing "How to Study" techniques on any subject, generally students tend to take their chances. If only we could find the proper stimulus, our popularity and accountability quotient would soar.

One of the ways we have tried to make our program at Odessa College more relevant is by offering alternative opportunities in addition to our traditional reading program. Functioning as a center for reading improvement, the open Reading Lab accepts college students and other interested adults on an open registration basis; that is, a student may register for credit courses at the beginning of a semester or at any time thereafter. Further, non-credit enrollment is available to anyone, including the area junior and senior high school students through the Adult and Continuing Education program. This allows for a self-paced plan of study, developed through student-instructor conferences. We also keep our reading lab open from eight to five each day, enhancing flexible scheduling.

Another way we have tried to make our program relevant is to develop a testing program for area high school seniors. By working with high school principals and counselors, group testing is done with the Nelson-Denny Reading Test. Our purpose is

to make the student aware of the importance of their developing good reading skills not only for academic success in college but also in the world of work. Such reading ability information will be invaluable to the student as he makes his plans for the future with an advisor or with the college counselor. I should like to stress, however, that it is crucial that the general community understands the purpose of the test. And the testing must be administered in a non-threatening environment; the testing must have the sanction of both the public school and college administrators; and the results must be given in a way which is meaningful to the student. Doing any testing can be a very touchy situation; some people believe that aspersions are being cast upon the public schools; others insist that testing is discriminatory toward the minorities. We of the reading profession certainly understand how important it is for the individual to become aware of his potential and to know that help is available when needed or wanted. So, public relations are vital as we strive for relevancy.

A third move toward relevance for us at Odessa College has been in the area of technical and vocational education. Fortunately, several of our faculty members have taken our reading courses; one of these is the departmental head of Machine Technology. Because of his belief in our program, we are developing a testing program for his department, and are developing guidelines with appropriate vocabulary, study guides, shop manuals and texts. The program seems to be promising and, hopefully, if successful, will cause other departments to want such personalized service.

For many years we've had a standing offer to the

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entire campus to calculate readability level for textbooks either current or under consideration. More and more departments and individuals are responding year after year. (Some departments are not interested because their students - nurses, for example—must learn a certain body of information and it's felt that the information can not be "watered down" through the use of easier textbooks.)

In the April 1978 issue of The Reading Journal Miriam Chaplin states that college reading programs can be relevant if the following points are kept in mind by the teachers: (1) dispel the myth of remediation; (2) define and articulate our philosophy so that the theory underlying reading instruction emphasized and is fully based upon strengths students possess rather than their deficiencies; (3) broaden the student based (how well are we meeting all aspects of our community population?) (4) be available to all students on a voluntary basis; (5) offer courses for full academic credit; and (6) relate instruction to students' academic experiences so that the course content incorporates the content of their textbooks.²

Where does serendipity fit in to relevancy? For me, twenty years of accidental remarks by students like the following have inspired me and kept me going:

--A county judge: "I tell my constituents all the time what you told me about success."

--A county social worker: "I'd never have passed the State Certification Exam without this course and your belief in me."

--A doctor: "My pre-med vocabulary test was a

breeze, thanks to you and reading."

And there is the time one of my students, a functional illiterate, and I both cried when he finally learned to write his name.

If we dedicate ourselves to helping students obtain those reading skills most relevant to their needs, then serendipities like the preceding ones will continue to happen.

BIBLIOGRAPHY

1. Marquis, Don. The Lives and Time of Archy and Mehitabel, Garden City, N.Y., Doubleday and Co., Inc., 1950, p. 349.
2. Chaplin, Miriam T. "Where Do We Go From Here? Strategies for Survival of College Reading Programs," Journal of Reading, Volume 21, No. 7 (April, 1978) p. 586-589.

WHAT JUNIOR-COLLEGE FACULTY AND STUDENTS
EXPECT FROM READING COURSES

Dr. Helen Covington
North Harris County College
Dr. Lee Mountain
University of Houston

Living up to the expectations of others is always a problem. It's a double-barreled problem, however, for junior college reading teachers.

They are faced on one hand with the expectations of their students and on the other hand with the expectations of the content-area faculty members at their junior colleges. (Pollard, 1974).

A high risk freshman might enter a reading/study skills program with the expectation that the teacher will help him double his reading speed. A junior-college English professor might expect the reading teacher to enable the students to handle the vocabulary of Shakespeare.

Junior-college reading teachers have a better chance of living up to such expectations if they (1) understand exactly what their students and the other faculty members expect, and (2) know the points on which the expectations of the two groups are alike and different.

A study was therefore designed to investigate these questions:

1. What do students expect from reading/study skills programs in junior colleges?
2. What do content-area faculty members expect from these reading/study skills programs?
3. On what items do the expectations of the two groups coincide or statistically conflict?

Procedures for the Study

In order to get answers to those questions, two sets of correlated questionnaires were given to selected junior-college students and faculty members (Covington, 1977). All of the junior colleges in Texas were included in the study. Eight full-time faculty members from each of these 59 junior colleges were contacted. They were selected from basic core and certain vocational areas (a total of 464 faculty). Students from eight junior colleges were selected for the study. The choice of these eight colleges were based on the geographic location, ethnic population, total student enrollment, and urban/suburban location so that these colleges would be representative.

The faculty questionnaires were mailed, and the student questionnaires were personally administered. The students responding were those who were newly enrolled in reading/study skills programs. They had received neither the course syllabus nor their reading scores from tests administered in the reading class. These factors were controlled in order to obtain "pure" rather than "directed" expectations. A total of 129 faculty members and 382 students participated in the study by completing the questionnaire.

The questionnaire included twenty common components of reading/study skills programs. Students and faculty rated each item on a five-point scale ranging from Highly Important to Unimportant. Percentage distributions were obtained for the

22.

items. The percentages were dichotomized by grouping the top two ratings as positive and the bottom three as negative. Significant differences were computed at the .05, .01, and .001 levels by the binomial distributions.

Student and Faculty Expectations

Analyses of the questionnaire responses yielded both broad and detailed answers to the questions regarding student and faculty expectations of reading/study skills programs.

First, let's look at the broad answers.

1. Students enter reading/study skills programs with great expectations. Junior college freshmen expect both elementary and advanced skills to be covered in depth.
2. Content-area faculty members have more limited expectations than do the students. They expect thorough coverage of basic skills, but they don't attach as much importance to the coverage of advanced skills in the reading/study skills program.
3. The expectations of the two groups coincide more often than they statistically conflict. The points of conflict, however, are of vital concern to the junior college reading teacher.

Next, let's look in more detail at student and faculty expectations regarding the junior college reading/study skills program.

Students expect relatively little instruction in phonics, syntax, textbook organization, vocabulary,

outlining, and notetaking. But they expect the following fourteen topics to receive heavy emphasis:

1. Comprehension of the main idea
2. Comprehension of details
3. Use of context
4. Following directions
5. Dictionary skills
6. Listening skills
7. Responding to test questions
8. Study skills
9. Deductive learning of concepts
10. Cause and effect relationships
11. Advanced comprehension skills
12. Library research
13. Inductive learning of specifics
14. Rate of reading

Content-area faculty members expect that students will get relatively little instruction in phonics, syntax, textbook organization, and outlining. But they expect notetaking, vocabulary, and the first ten of the preceding fourteen listed topics to receive heavy emphasis in the reading/study skills

program.

The last four listed topics, however, bring to light differences in the expectations of students and faculty that are significant at the .001 level, as shown in Table 1. Regarding advanced comprehension, library research, inductive learning, and reading rate, faculty expectations are considerably lower than student expectations.

The junior college reading teacher needs to look at those four areas, one by one, to account for the differences in expectations.

Advanced Comprehension

Content-area faculty demonstrate a "walk before you run" attitude regarding the comprehension skills of those freshmen who take reading/study skills courses. The faculty members expect that reading for the main idea and for supporting details will be major thrusts of the program. They do not expect, however, that the junior college reading teacher will get as far as advanced comprehension skills (critical reading, evaluation of reading material, etc.) with the freshmen. The student, on the other hand, do expect advanced comprehension skills to receive major emphasis in their reading/study skills programs.

The junior college reading teacher would do well to try to educate the faculty regarding the interrelatedness of basic and advanced comprehension skills. According to Ahrendt (1975) and Harris (1970), the comprehension skills of a competent reader should range from simple recall to complex interpretation. Student expectations reflect a better understanding of this concept than do faculty expectations.

Table 1

Student and Faculty Expectations
Regarding Reading/Study Skills Course Components

<u>Course Components</u>	<u>Significant Differences (t) between Students and Faculty</u>
1. Comprehension of main ideas	NS
2. Comprehension of details	NS
3. Use of context	NS
4. Following directions	NS
5. Dictionary skills	NS
6. Listening skills	NS
7. Responding to test questions	NS
8. Study skills	NS
9. Deductive learning of concepts	NS
10. Cause and effect relationships	NS
11. Advanced comprehension skills	.001
12. Library research	.001
13. Inductive learning of specifics	.001
14. Rate of reading	.001
15. Notetaking	.05
16. Outlining	NS
17. Vocabulary	.01
18. Textbook organization	NS
19. Syntax	NS
20. Phonics	NS

Library Research

Some library research skills are common to all content areas. Others are not. Each content area has, and teaches the use of, information sources particular to its topic. Content-area faculty consider library research very important, but they expect to handle it within their own courses. They do not appear to expect the reading/study skills program to do this job for them.

Freshmen do not have a sophisticated awareness of library information sources particular to concern content areas. Therefore, they expect "to learn it all" in a reading/study skills course.

The junior college reading teacher might receive guidance in how far to go in the teaching of library research skills from Sweiger (1973), who points out that there is an absence in the reading class of "research papers and lengthy homework assignments" (p. 112) that are required of students in the content area course. Developmental students, contended Sweiger, must be prepared by the reading teacher to meet their academic pressures if they are to succeed in regular college courses.

Inductive Learning

There seems to be a great divergence of opinion between students and faculty regarding inductive learning. Mastering the "specifics first, then concepts" approach was rated as highly important by students. Faculty members, however, considered this one of the least important skills that might be taught in a reading/study skills course. The faculty strongly favored the deductive approach over the inductive approach. So, the junior college

reading teacher who promotes deductive learning is meeting the expectations of both faculty and students. But when that teacher presents the inductive approach, he is fulfilling only student expectations.

Since the majority of the content-area faculty apparently consider their teaching approach to be deductive, the junior college reading teacher might consider emphasizing the deductive approach, though authors of texts often treat the two approaches equally (Howard et al., 1974; Shafer et al., 1973).

Rate of Reading

The questionnaire responses regarding speed reading brought to light opposing expectations. Students expected speed reading to be a major part of their reading/study skills program. Content-area faculty, however, rated speed reading lower than any other course component. They favored teaching flexibility of reading rate in the reading/study skills program, but not speed reading.

This faculty reaction probably reflects the prevailing fear that if speed goes up, comprehension goes down; and content-area faculty strongly expect the junior college reading teacher to help students improve their basic comprehension skills. Perhaps the reading teacher needs to allay the fears of the faculty regarding negative effects of speed. According to Schoenberg (1970), improvements in comprehension often go hand in hand with increases in speed.

Conclusions

Students and faculty have more areas of agreement

than disagreement regarding their expectations of junior college reading/study skills programs. The main areas of disagreement are shadowed by (a) lack of knowledge or misinformation about the reading process and (b) feelings regarding "territorial rights" on the part of content-area faculty.

Therefore, this study's main recommendation to the junior college reading teacher is to work more closely with content-area faculty colleagues. Student expectations are usually adjusted as the course progresses. But faculty expectation can be adjusted only through contact with the reading/study skills program. The junior college reading teacher, therefore, needs to get his message across to the rest of the faculty so that they hold expectations that can be realized.

References

- Ahrendt, Kenneth M. Community college reading programs. Newark, DE: International Reading Association, 1975.
- Covington, Helen C. Analysis of three sets of expectations concerning reading and study skills programs in selected Texas junior colleges (Unpublished doctoral dissertation, University of Houston, 1977).
- Harris, Albert J. How to increase reading ability (5th edition). New York: David McKay Company, Inc., 1970.
- Howard, C. Jeriel, Tracy, Richard R., and Thomas, Coramae. Contact: a Textbook in Applied

Communications (2nd edition). New Jersey: Prentice-Hall, Inc., 1974.

Pollard, Willie D. A comparison of the perceptions of faculty and students concerning the benefits, needs and objectives of the developmental skills program at New York City Community College (Doctoral dissertation, Michigan State University, 1974). Dissertation Abstracts International, 1974, 35.

Schafer, Robert D., and Heis, Karen M. Success in reading: book 8. New Jersey: General Learning Corporation, 1973.

Schoenberg, B. Mark. The development and evaluation of a program for the teaching of reading in a junior college (Doctoral dissertation, University of Houston, 1970). Dissertation Abstracts International, 1970, 30, 2861-A. (University Microfilm No. 69-21, 768).

Sweiger, Jill. Teaching reading as a reality at the community college. Programs and Practices for College Reading in the Twenty-Second Yearbook of the National Reading Conference, 1973, 111-1115.

EVALUATING A TUTORIAL PROGRAM

Faye Curran
Miami University-
Middletown, Ohio

In a recent nationwide study of developmental education programs, it was found that seventy-three per cent of the colleges surveyed maintained tutorial programs. Indications were, however, that many of the colleges were not evaluating the effectiveness of their tutoring programs.

In today's climate of accountability in education, coupled with the reduction in federal grants and state appropriations, it seems suicidal not to maintain an ongoing progress of scientific evaluation of tutorial programs.

Our tutorial program at Miami University-Middletown, has been in full-time operation for two years. At the end of each school term, three sets of evaluation forms are distributed. These forms are sent to: 1. faculty, from whose classes the tutees have come, 2. tutors who performed the tutoring, and 3. the tutees who were helped.

Feedback from our three sources of evaluation indicated that the tutoring program was beneficial. We realized, however, a need for a more objective evaluation system. The method chosen for this purpose was a means of indicating the grade points of our tutees. To do this, it was necessary to predict the grades the students would receive without tutoring. The students' ACT or CEEB scores enabled us to make such predictions. Either the ACT or the College Board scores can be converted into prognosis scores (grades). One can convert the

overall scholastic aptitude score into a prognostic grade-point (predictor) of generalized achievements; or, in the case of ACT, where sectional scores are supplied, one can predict subject grades.

The following is the grade-point predictor format:

GRADE-POINT PREDICTORS
ACT AND CEEB

Percentiles		ACT					CEEB
		English Scores	Math Scores	Soc.Sci. Scores	Nat.Sci. Scores	Cum. Scores	Verbal & Quantity
89 →	A	26→	29→	27→	29→	27→	650→
70-88	B	22-25	24-28	24-26	25-28	23-26	550-649
31-69	C	18-21	15-23	19-23	17-24	16-22	450-549
10-30	D	12-17	10-14	9-14	12-23	12-15	350-449
0- 9	F	←11	←9	←11	←11	← 11 ₊	← 349

By using the grade-point predictor table it is possible to take the ACT score for a student and predict a grade-point estimate in a given subject. As an example, suppose a student scores a 14 on the English section of the ACT exam. By looking at this table we can see that this student's grade-point predictor in English will be a D. To take a second example, suppose a student scored 21 on the Social Science section of the ACT exam and is taking a sociology course. His grade-point predictor would be a C. Similarly we could use the College Board scores.

As tutors are assigned to assist tutees the tutor, tutee, and professor then engage in a conference. An Instructor's Recommendation on Tutoring form is completed during this interview. Included in information asked on this form is the tutee's grade in the subject at the beginning of tutoring. This beginning grade gives another frame of references for the tutoring and shows the tutee's accomplishment in the event that he/she has attempted part of the course without the benefit of tutorial support. Later, when the professorial evaluations are returned for each student, the terminal grade in the tutorial course is recorded; thus, a full profile of academic prognosis, beginning grade, and terminal grade will be ready evidence.

Once the profile is completed, a simple glance at it will reveal the degree of success a tutee has experienced both in terms of his expected achievement and in terms of his beginning grade.

In our program the information is recorded in the following chart of Differences Between Grade Prognosis and Achievement:

DIFFERENCE BETWEEN GRADE
PROGNOSIS AND ACHIEVEMENT

Term:	Term:
No. of students Involved:	No. of students involved.

Achieved a grade 3 levels
above prognosis

Achieved a grade 2 levels
above prognosis

Achieved a grade 1 level
above prognosis

Achieved as predicted

Fell back

Passed course but no
prognosis had been made

Course finished
as incomplete

Dropped course

Failed

Data incomplete

As can be noted from the preceding chart, some students may advance one, two, or three grade levels with the help of tutoring. In any instance, we now see the degree of performance our tutored students have achieved.

But we include two additional steps in evaluating our tutorial program. The first step involves the tabulation of data concerned with the reduction in

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attrition of students due to the tutorial program; the second step is concerned with translating the data to tuition savings for the institution.

For this purpose our program uses the following Resultant Attrition Reduction form:

RESULTANT ATTRITION REDUCTION

TERM:

NO. OF STUDENTS INVOLVED:

Students prevented
from going on
academic suspension

Students prevented
from going on
academic probation

Students removed
from academic
probation

Students removed
from academic
suspension

Students whose grades
were kept high for
transfer purposes

DEVELOPMENTAL EDUCATION'S CONTRIBUTION TO
FISCAL SOLVENCY

SCHOOL YEAR	RETAINED STUDENTS	PER TERM STUDENT FEES	STUDENT FEES DEVELOPMENTAL EDUCATION RETAINED FOR

By coupling the information these last two steps provide with the feedback from the tutors, tutees, and faculty, we now have a comprehensive means of evaluating the tutorial program at the University of Miami-Middletown.

CHANGES IN READING RATE BY STUDENTS WITH
DIFFERENT PRE-INSTRUCTION RATES

Walter J. Lamberg
University of Texas
Austin

A number of studies have demonstrated that positive changes in rate of reading can be achieved through practice by secondary and post-secondary students. These studies have also lent support to the belief of many educators that a rate of about 250 words per minute is an average rate for post-elementary readers. Such studies have provoked a number of questions about rate, for example, the meaningfulness of measures of rate by standardized tests and the relationship between rate gains and comprehension and between rate and reading flexibility.

One practical consideration not addressed in research has to do with desirable objectives for rate improvement. One way of approaching this issue may be to compare pre and post-instruction performances of students whose pre-instruction rate is already above average with performances by students whose rates are average and below average. Such a comparison apparently has not been considered in previous studies. Groups apparently consisted of below and above average, as well as average, readers.

The idea for this study was suggested by experiences of the investigator in presenting a mini-course in reading improvement to prospective reading teachers, as part of their work in a "methods" course in teaching secondary reading. The rationale for the mini-course was that teachers would be better prepared if

they tried the methods themselves and had seen changes occur in their own reading. Procedures were based on those found to be effective in reading improvement courses offered by The Reading and Learning Skills Center, The University of Michigan. The investigator found that, during one year, though most students demonstrated positive gains in only a few practices, a number showed pre-post decreases. Many of those were students whose pre-test rate was well above average. The investigator decided, in the second year, to test for significant pre-post differences for groups of students whose pre-test indicated they were average and above and below average readers in terms of rate.

Review of Literature

Carpenter and Jones (1975) cited twelve studies, conducted between 1965 and 1971, which reported positive gains in rate in reading improvement courses. In their own study, Carpenter and Jones found significant pre-post gains in rate, comprehension and vocabulary for two groups of college students in reading improvement courses. For one group, the mean pre-test rate was 255 words per minute; the mean post-test rate was 515; for the second group the means were 245 and 510.

Smith (1975) has argued that the type of comprehension test must be considered in interpreting comprehension scores. Her argument is buttressed by a study by Samuels and Dahl (1975), who were interested in reading flexibility rather than gains in rate. In their study, the mean for college students was 291 when comprehension was tested with questions calling for recall of specific details, but 461, when tested with questions calling for recall of general ideas. The only instruction subjects received was two

practice tests given to orient them to the two different types of comprehension tests.

The studies cited above lend support to the conclusion that an average rate is about 250 words per minute (when details are tested). This idea is presented by educators such as Della-Piana (1968), Miller (1976), and Robinson (1975). A higher norm of 300 is presented by McCracken (1966) for students in the seventh grade or above. There is also a frequent reference to Spache's discussion (1962) in which he argues that a rate of 900 is the optimum rate (Burmeister, 1974; Miller, 1976).

Whereas Della-Piana (1968) seems to suggest that 250 is a desirable rate for secondary students, others seem to suggest that students not only can but should increase their rates well beyond this average. Only one discussion was found to be more explicit in recommendations. Robinson (1975) characterizes 250 as a "rather slow rate (p. 191)" appropriate for study-reading of difficult material and recommends 500, for reading, and 1000, for scanning, as appropriate rates for other purposes.

The Study

Hypothesis. The question addressed in this study was whether or not groups of students who differed in pre-instruction rates would respond differently to rate-improvement exercises. The null hypothesis was: There would be no significant differences between pre and post-instruction rates for students whose pre-instruction rates indicates they were:

1. below average in rate.
2. average in rate.

3. above average in rate.

Subjects. Subjects were 74 students who participated in a mini-course in reading improvement as part of their work in the teaching of secondary reading, offered by a college of education of a southwestern university.

Design. A pre-test-treatment-post-test design was employed. Subjects were divided into groups on the following basis. The mean and standard deviation of the pre-instruction rate for all subjects were computed ($\bar{x}$ = 283.31, S.D. = 64.71). Subjects whose rate fell within the range of the standard deviation (251-316) were designated as average. Those whose rate was less than 251 (153-250) were designated below average. Those whose rate was more than 316 (317-480) were designated as above average.

Materials. Six selections were used from Reading Improvement Program (St. Louis: Perceptual Development Laboratories, 1956). Selections were 2000 words in length and were measured at the college level (13-16; reading-ease score = 43), according to the Flesch Formula (Flesch, 1951). Comprehension of each story was tested by ten multiple-choice questions calling for recognition of details and main ideas.

Procedures. For the pre and post-tests subjects were asked to read a selection at a comfortable rate. For the practice, subjects read four selections and were asked to try to increase their rate while maintaining a sufficient level of comprehension (80 percent or eight of ten questions answered correctly). Subjects were aided in increasing rate by the following procedures: (1) The instructor recorded on the board the passing time in minutes and ten second intervals so that students would know how much time they had

taken to read a selection. (2) A rate-time conversion table was used to determine average words per minute. (3) An answer key was used to check comprehension. (4) For each practice, students set an objective for a small gain in rate and decrease in time. (5) The instructor called out the time to aid the students in pacing themselves. (6) Students were taught to use a survey technique, i.e., a variation of SQ3R (Robinson, 1941; Ballard and Lamberg, 1974) to pose questions while reading. (7) After each practice, students recorded on a graph average words per minute and percent of comprehension.

Results. Performance on pre and post-test instruction was measured by a multiple of average words per minute times percent of comprehension. This measure of "reading efficiency" or "rate of comprehension" is commonly used in reading improvement courses to take into account changes in both rate and comprehension (Miller, 1976). Means and standard deviations were computed for the pre and post-instructional scores for each group. A t-test for related measures (Bruning & Kintz, 1968) was computed for each group. In addition, percentages of subjects in each group who showed positive pre-post changes were determined.

There were significant differences between pre and post-test scores for below average subjects (Group 1) ($\bar{x} = 225.67$, S.D. = 23.5, vrs $\bar{x} = 313.90$, S.D. = 73.42, with $t = 5.62$, $p < .001$). There were significant differences between pre and post-test scores for average subjects (Group 2) ($\bar{x} = 280.69$, S.D. = 18.66 vrs $\bar{x} = 374.69$, S.D. = 109.84, with $t = 5.20$, $p < .001$). There were no significant differences between pre and post-test scores for above average subjects (Group 3) ($\bar{x} = 373.76$, S.D. = 52.45, vrs $\bar{x} = 396.88$, S.D. = 89.52, with

$t = 1.30$, $p < .50$). Hypotheses 1 and 2 were rejected; hypothesis 3 was not rejected. Results are presented in Table 1.

For Group 1, 20 of 21 or 95 percent showed positive pre-post changes. For Group 2, 31 of 36 or 86 percent showed positive changes. For Group 3, 10 of 17 or 59 percent showed positive changes.

Discussion. The results of the study lend further support to the belief that an average rate for college students is around 250 words per minute. If the standard deviation can be used, to designate a range for average rate, the results (251-316) correspond to averages and minimum rates suggested by educators. Results of the study also lend support to the findings of previous studies which showed that gains in rate could be achieved through appropriate practice.

The implications of the study are that students who are already reading above the average range for rate may respond differently to rate-improvement exercises from students who are reading at average or below average rates. Two interpretations are reasonable. First, above average readers may need different instructional procedures or materials. Second, many above average readers may lack the motivation for (or not find intrinsic rewards in) improving rate. The results suggest the following guidelines for reading improvement courses. First, a reasonable objective to be met would involve a somewhat higher than average rate (above 300). Second, students who already read at an above average rate should have the option as to whether (1) they will work to increase their rate, or (2) they will learn to read, at the high rate they have already achieved, more difficult materials or for more difficult purposes.

Table 1

Before and After Instruction Rate Scores for
Subjects with Below, Average, and Above-Average Rates

	Pre	S.D.	Post	S.D.	+
Group 1 N = 21	225.67	23.5	313.90	73.42	5.62 ^a
Group 2 N = 36	280.69	18.66	374.69	109.84	5.20 ^b
Group 3	373.76	52.45	396.88	89.52	1.30 ^c

^a $\underline{p} < .001$

^b $\underline{p} < .001$

^c $\underline{p} < .50$

- Ballard, R. and W. J. Lamberg. Teaching the picture and text survey. Ann Arbor: Office of Instructional Services, The University of Michigan, 1974.
- Bruning, J. L. and B. L. Kintz. Computational handbook of statistics. New York: Scott, Foresman, 1968.
- Burmeister, L. E. Reading strategies for secondary school teachers. Reading: Addison-Wesley, 1974.
- Carpenter, W. and Y. Jones. "Improving comprehension and rate gain at the college level," Journal of Reading, 19, 3 (December, 1975), 223-225.
- Della-Piana, G. M. Reading diagnosis and prescription: An Introduction. New York: Holt, Rinehart and Winston, 1968.
- Flesch, R. How to test readability. New York: Harper and Brothers, 1951.
- McCracken, R. A. "The informal reading inventory as a means of improving instruction," in Perspectives in reading, No. 8. Newark: International Reading Association, 1966.
- Miller, L. L. Personalizing reading efficiency. Minneapolis; Burgess, 1976.
- Robinson, H. A. Teaching reading and study strategies: The content areas. Boston: Allyn and Bacon, 1975.
- Samuels, S. J. and P. R. Dahl, "Establishing appropriate purpose for ending and its effect on flexibility of reading rate," Journal of Educational Psychology, 67, 1 (1975), 38-43.

44.

Smith, B. G. "A down-to-earth guide for interpreting reading rate scores," Journal of Reading, 19, 2 (November, 1975), 128-130.

Spache, G. D. "Is this a breakthrough in reading?" The Reading Teacher, 25 (January, 1962), 258-263.

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